

**Emergency Transboundary
Outbreak Pest (ETOP) Situation
Update for August with a Forecast
till mid-October, 2015
avec un résumé en français**

SUMMARY

The **Desert Locust (SGR¹)** situation remained calm in all outbreak regions and only low numbers of scattered solitary immature and mature adults were reported in a few places in the summer breeding areas in **Sudan, Egypt** and **Pakistan**.

Forecast: Small-scale breeding is likely during the forecast period in areas where rainfall has occurred and vegetation has begun developing in most of the primary summer outbreak regions.

OTHER ETOPS

Red (Nomadic) Locust (NSE): NSE populations persisted in primary outbreak areas in **Tanzania** and continued to further concentrate in patches of green vegetation during August. A similar situation was reported the outbreak areas in **Malawi, Mozambique** and **Zambia**. Swarms will likely form in the primary outbreak areas and escape into neighboring areas.

¹ Definitions of all acronyms can be found at the end of the report.

Madagascar Migratory Locust

(LMC): No update was received at the time this report was compiled, but the locust situation is expected to have subsided in most of the outbreak areas during August and significant activities are not expected during the forecast period.

Italian (CIT), Moroccan (DMA), Asian Migratory (LMI) Locusts in Central Asia and the Caucasus (CAC): No update was received at the time this report was compiled. DMA populations are expected to have ended and only a few CIT and LMI activities may have persisted in a few places in the Caucasus. No further activities are expected during the forecast period.

African Armyworm (AAW): AAW situation remained calm in all outbreak areas in August and no activities are expected during the forecast period.

Quelea quelea (QQU): QQU birds were reported in irrigated rice fields in Tana County in **Kenya**. The birds were also reported in Morogoro region in **Tanzania** and they will likely continue being a problem to irrigated crops and winter wheat during the forecast period.

Active surveillance and monitoring as well as timely preventive interventions remain essential to avoid unexpected

surprises in all ETOP outbreak countries.

USAID/OFDA Plant Health and Pesticide unit (AELGA) will continue monitoring ETOP situations closely and provide updates and advices as often as necessary. **End summary**

RÉSUMÉ

La situation Criquet pèlerin (SGR) est restée calme dans toutes les régions d'épidémie et seuls de faibles effectifs d'ailés immatures et matures solitaires épars ont été signalés en quelques endroits dans les zones de reproduction estivale du Soudan, l'Egypte et le Pakistan.

Prévisions: Une reproduction à petite échelle aura probablement au cours de la période de prévision dans la plupart des régions de l'éclosion d'été primaires dans les zones où la pluviométrie a eu lieu et la végétation a commencé à élaborer.

AUTRES ETOPS

Criquet Rouge (Nomade) (NSE): populations NSE a persisté dans les zones de foyer primaire en Tanzanie où ils ont continué à concentrer davantage dans les taches de végétation verte. Une situation similaire a été signalé dans les aires grégarigènes au Mozambique, au Malawi et en Zambie

au cours de cette période. Les essaims vont probablement se former dans les zones des foyers primaires et échapper dans les régions voisines.

Locust Madagascar migrateurs

(LMC): Aucune mise à jour a été reçu au moment où ce rapport a été rédigé, mais la situation acridienne devrait avoir diminué dans la plupart des zones en Août et les activités importantes ne sont pas attendus au cours de la période de prévision.

Italien (CIT), du Maroc (DMA), Asiatique migrateurs (IMT) Criquets en Asie centrale et dans le Caucase (CAC): Aucune mise à jour a été reçu au moment où ce rapport a été compilé. Cependant, les populations DMA sont censés avoir terminé et seulement quelques-uns CIT et activités peuvent IMT ont persisté dans quelques endroits dans le Caucase. Pas d'autres activités sont attendus au cours de la période de prévision.

Chenille Légionnaire africaine

(AAW): La situation AAW est restée calme en Août et aucune activité sont attendus au cours de la période de prévision.

Quéléa (qqu): les oiseaux ont été signalés qqu attaquer riz irrigué dans le comté de Tana au Kenya. Les oiseaux ont également été signalés dans la région de Morogoro en Tanzanie.

L'oiseau sera probablement continuer à être un problème pour les cultures irriguées et le blé d'hiver au cours de la période de prévision.

La surveillance active et la surveillance ainsi que des interventions préventives en temps opportun demeurent essentiels pour éviter les surprises inattendues dans tous les pays d'épidémie ETOP.

USAID / OFDA la santé des plantes et de l'unité des pesticides (AELGA) continuera de surveiller de près les situations ETOP et fournir des mises à jour et des conseils aussi souvent que nécessaire. Résumé Fin

*The increased awareness among national authorities and the support from USAID/OFDA and other development partners have helped frontline and primary invasion countries in Northern Africa and Sahel West Africa, i.e., **Algeria, Chad, Libya, Mali, Mauritania, Morocco, Niger, Senegal and Tunisia** to establish autonomous unit for the prevention and control of SGR.*

OFDA ETOP Activities and Benefits

With the financial support from USAID/OFDA and other donors FAO established an online Pesticide Stock Management System (PSMS) in more than 50 countries around the globe, including many in the SGR outbreak

regions in West and North Africa, the Horn and Eastern Africa and many more. Participating countries are now able to maintain current inventories of their stocks, including usable and obsolete, as well as able to prevent unnecessary accumulations of pesticides and empty containers. Thanks to the PSMS, many countries have avoided unnecessary procurements or stockpiling of pesticides. This in turn has minimized costly future disposal operations in a number of countries and thereby contributed to the safety and well-being of their citizens and the environment.

OFDA-sponsored tri-state community-based armyworm monitoring, forecasting and early warning (CBAMFEW) project continues making progresses. It strives to reduce the threats of AAW to food security and livelihoods of vulnerable populations by improving farmers' skills, knowledge and perceptions of the AAW.



CBAMFEW forecaster in Nkama village, Kilindi District in Tanzania explains monitoring procedures and the benefits the pheromone trap and the rain gauge brought to the community. The forecaster received training through OFDA-funded project (photo courtesy: Y. Belayneh).

During his project site visits, Technical Advisor witnessed farmer forecasters at

all 18 AAW monitoring sites declaring AAW outbreaks a no-mystery or a curse or a threat to them.



Farmer forecasters, district Agricultural Development Officer, and a field agent are proudly posed next to the pheromone trap that the farmer forecasters manage; Masasa village, Handeni District, Tanzania (Photo courtesy: Y. Belayneh)

Thanks to the support from USAID/OFDA and partnering organizations, farmers can now identify and prepare to prevent AAW outbreaks from occurring and stop the caterpillars from causing damage to their crops and pasture.

To date, pheromone traps and rain gauges have been installed in 278 villages in Tanzania, Kenya and Ethiopia. These tools are crucial for monitoring AAW and weather conditions.

USAID/OFDA's mapping unit has developed a dynamic map that shows the locations of all trap sites and a lot more - click here bit.ly/1PAydht to view the web version of the map. The map will be continuously updated with additional useful data layers, including cropping patterns, AAW outbreak frequencies, number of requests for interventions, population load, land use patterns,

weather, etc.



Mr Michael Nyaga (R), a farmer forecaster in Ngura sub-location in Mbeere North County in Kenya explains to the MoA staff the benefits his village gained from the CBAMFEW project (photo courtesy; Y. Belayneh).

Over the course of the past years, the project has conducted several training programs, national, district and village meetings, workshops as well as provided technical assistance to participating communities in all three countries. It has also launched an innovative mobile phone-based data collection and management technology. This technology is being implemented in all three countries.



The mobile technology training held by the Tanzania national armyworm monitoring unit and the DLCO base manager in Tengeru, Arusha. OFDA staff advised partners on the implementation of the technology (see photo above, courtesy: Y. Belayneh).

OFDA/PSPM is also working with other partners to explore means and ways of expanding this innovative technology to benefit other AAW affected countries.

OFDA continued its support for sustainable pesticide risk reduction initiatives through stewardship network (SPRRSN). This initiative is aimed at strengthening capacities of vulnerable communities to help reduce pesticide related risks and improve their safety, protect their assets and the shared environment. To date, OFDA/PSPM has successfully launched two sub-regional SPRRSNs in Eastern Africa and the Horn. The Horn of Africa SPRRSN initiative has created an Association dubbed as Pesticide Stewardship Association-Ethiopia (PSA-E) and PSA-E is considered a model for future similar initiatives across similar regions.

OFDA-PSPM has plans to extend this initiative to other parts of Africa, the Middle East, CAC and other regions. In his recent visit, OFDA Senior Technical Advisor for Pesticides and Pests observed PSA-N activities in Ethiopia and noted progresses and constraints among beneficiaries.

OFDA continued its support for the DRR program to strengthen national and regional capacities for ETOP operations. The program which is implemented through FAO has assisted frontline countries to mitigate, prevent, and respond to ETOP outbreaks. It has also helped participating countries avoid

potential emergencies that emanate from misuse and mishandling of pesticides, pesticide-incorporated materials and application platforms.

OFDA supported DRR program for ETOP management in Central Asia and the Caucasus (CAC) is on track. The program promotes collaboration among neighboring countries and encourages coordination of joint monitoring, surveillance, reporting and launching preventive interventions to minimize the threats of ETOPs to food security and livelihoods of millions of vulnerable populations.

Note: All ETOP SITREPs can be accessed on USAID/OFDA Pest and Pesticide Management website:

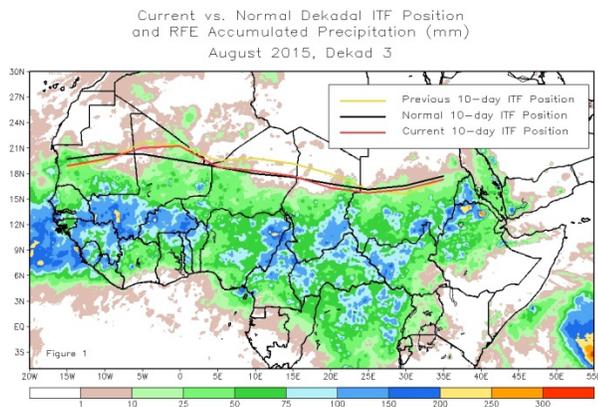
<http://www.usaid.gov/what-we-do/working-crises-and-conflict/responding-times-crisis/how-we-do-it/humanitarian-sectors/agriculture-and-food-security/pest-and-pesticide-monitoring>

Detailed information on weather and ecological conditions

Weather and ecological conditions:

During the third dekad of August, the ITF slightly withdrew from its previous position in mid-August, but remained above-average compared to climatology. The mean western portion of the ITF (10W-10E) was approximated at 19.8 N, still above the normal climatological position (19.4) for the end of August. The position in the west triggered wide-spread rainfall across much of the

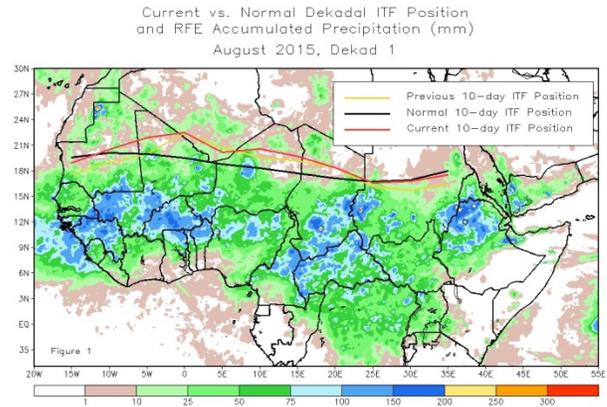
northern Sahelian regions of Mauritania, Mali and Niger. The mean eastern portion of the ITF (20E-35E) was approximated at 16.4 N, remaining below the normal climatological position (16.8) for the end of August. The slight ITF suppression was evenly distributed over western Sudan and Chad. The below figure illustrates the current position (**red**) of the ITF relative to its climatological position during the 3rd dekad of August (**black**) and its former position during the 2nd dekad of August (**yellow**) (NOAA, 9/2015).



During the first dekad of August, the ITF continued northward migration throughout several regions of Africa. The mean western portion (10W-10E) of the Front was estimated at 21.1°N, nearly 2 degrees above the normal climatological position for this period of August. The anomalous mean western ITF position was associated with heavy rainfall extending as far north as northern Mauritania and northern Mali.

This latest anomalous northward migration of the Front is the highest observed since the beginning of the season. The mean eastern portion (20E-35E) of the ITF was approximated at 17.3°N, and remained near the climatological normal position for early August. The below figure (August dekad 1) illustrates the current position (**red**) of

the ITF relative to its climatological position during the first dekad of August (**black**) and its former position during the last dekad of July (**yellow**).



Light to moderate rains were recorded in most of the summer breeding areas in **Sudan** during the first dekad of August and caused environmental conditions to improve and become favorable for the SGR breeding (PPD/Sudan).

In **Chad**, the ITF continued advancing northward and reached 21°N and 17°E during the 1st dekad of August causing rainfall in most of the outbreak areas in Arada, Kalait, Southeast of Fada, Haraz-Djombo and South of Salal. Vegetation has fully developed in most of the areas surveyed in Bol, Southeast of Fada, Mao, Kalait and Salal and ecological conditions are favorable for the SGR to breed and develop (NLCA/Chad).

Ecological conditions have become favorable along wide areas in northern Sahel where rains fell over vast areas stretching from **Mauritania** and to **Sudan** during the past months. This will likely allow some locust activities during the forecast period.

In **Morocco** generally hot and dry weather persisted during August with the

exception of a few localized showers accompanied by strong thunderstorms in a few places. The temperatures reached 44°C in the south and southeast of the Atlas and east of the Saharan provinces. Prevailing winds were generally southerly. Vegetation was dry and ecological conditions were generally unfavorable for locusts to survive with the exception of a few places in Draa valleys, Ziz-Ghris and the south eastern region.

Weather condition remained hot with persistent overcast in the SGR outbreak areas in **India** during the first fortnight of August. Newly developed, 1-2 dekad old green vegetation was reported in most of Rajsthan and Gugarat and patches of 2-3 dekad old green vegetation was detected in Jodhpur, Churu and in Barmer District near the Indo-Pakistan border during the first fortnight of August (DPPQS/India).

Dry and warm weather prevailed in **Malawi, Mozambique, Zambia and Zimbabwe** whereas **Kenya** and northern **Tanzania** experienced intermittent light showers. Vegetation continued to dry out in most of the NSE outbreak areas where grass burning is in progress and is expected to continue until the onset of seasonal rains sometime in November/December.

In **CAC**, generally hot and dry weather persisted in August creating conducive conditions for LMI and CIT locusts to further develop.

In **Madagascar**, dry winter weather persisted on the plateaus and warm weather prevailed in the mid to low altitude zones.

Note: Changes in the weather pattern can contribute to ecological shift in ETOP habitats and increase the risk of pest

*outbreaks, resurgence and even emergence of new pests. Moroccan locust (DMA) which is normally a low to medium altitude pest has shown a considerable vertical habitat expansion by up to 1,000 feet or 300 meters from its normal ambient altitude in **Uzbekistan**.*

*The **Asian migratory locust**, once a univoltin (a single generation per year) insect, recently began exhibiting two generations per year. These anomalous manifestations and phenomena, which are largely attributed to the change in the weather pattern and associated ecological shift, are a serious concern to farmers, rangeland managers, crop protection experts and others. Regular monitoring and documenting anomalous manifestations in pest behavior and habitats and timely reporting remain critical to help avoid and minimize potential damages to crops, pasture and subsequent negative impact on livelihoods of vulnerable communities and populations. **End note**.*

Detailed Accounts of ETOP Situation and a Forecast for the Next Six Weeks

SGR – Western Outbreak Region: The SGR situation remained calm in the western outbreak region. Only isolated low density (500 SGR/ha) hay color solitary adults were observed in Bryala at 16°46'18"N/21°47'08"E, southeast of Fada in **Chad** during this month. No significant locust numbers were reported in **Libya, Mali, Mauritania, Morocco, Niger** or **Tunisia** and northern **Mali** remained a no go for survey officers during August (CNLA/Chad, CNLCP/Mali, CNLA/Mauritania, CNLAA/Morocco, CNLA/Niger, CNLA/Tunisia, NCDLC/Libya).

Forecast: Small-scale breeding is likely in summer breeding areas in **Chad, Mali, Mauritania** and **Niger** where the seasonal rains have caused ecological conditions to improve (OFDA/AELGA, FAO-ECLO).

SGR (Desert Locust) – Central Outbreak

Region: In **Sudan**, survey operations commenced in the summer breeding areas and covered some 44,200 ha during the first week of August. Low density scattered solitary immature and mature adults were detected in a few places in irrigated areas near Abu Hamed (19 32N/33 20E), Berber (18 01N/34 00E) and Merowe (18 30N/31 49E) (PPD/Sudan). No locusts were reported in **Djibouti, Eritrea, Ethiopia, Oman, Saudi Arabia, Somalia** or **Yemen** during August (DLCO-EA, FAO-DLIS, LCC/Oman, PPD/Sudan).

Forecast: Small-scale breeding will likely increase locust numbers in the summer breeding areas in the interior of **Sudan** and western **Eritrea** during the forecast period (DLMCC/Yemen, FAO-DLIS, LCC/Oman, PPD/Sudan).



Locust and weather map for July, FAO, 8/2015)

SGR - Eastern Outbreak Region: Locusts were not reported in Rajasthan and Gujarat, **India** and only a few scattered adults were detected in **Pakistan** along the Indo-Pakistan borders during surveys carried out in August, but ecological conditions have begun improving during for locusts to begin appearing and breeding.

Forecast: SGR will likely begin breeding along the **Indo-Pakistan** borders where rainfall occurred. Active surveillance and monitoring remain critical to assess the locust situation and determine intervention actions in the coming months (FAO-DLIS, OFDA/AELGA).

Red (Nomadic) Locust (NSE): NSE populations persisted and continued to further concentrate in patches of unburned green vegetation in Ikuu-Katavi and North Rukwa plains in **Tanzania**. Low to medium density populations of NSE were also reported in the Malagarasi Basin, Wembere and Bahi Valley in **Tanzania**, in Buzi-Gorongosa and Dimba plains in **Mozambique**, Lake Chilwa plains in **Malawi** and Kafue Flats in **Zambia** during August (IRLCO-CSA).

Forecast: Swarms will likely form in Ikuu-Katavi and North Rukwa Valley and migrate and threaten cropping areas during the forecast period. IRLCO-CSA and MoAs from frontline member-states are encouraged to carry out regular monitoring and surveillance and institute preventive interventions as necessary (IRLCO-CSA, OFDA/AELGA).

Madagascar Migratory Locust (LMC):

No update was received at the time this report was compiled. However, locust activities are expected to have declined in the outbreak places.

Forecast: A few locusts will likely appear in a few places during the forecast period.

Note: It is to be recalled that the 3 year campaign treated more than 1.2 million ha during the 1st phase in 2013/14 and was able to halt the extension of the locust invasions and protected the main cereal growing areas in the country. The 2nd phase of the campaign was launched in September 2014 through mid-August 2015 and treated more than 621,000 ha and further reduced the locust invasions.

The 3rd and final phase of the campaign is expected to begin in September 2015 and continue through April 2016. This phase is aimed at bringing the locust populations back to recession and strengthening the capacities of national locust control units to be able to conduct regular monitoring, surveillance and institute preventive interventions effectively. According to FAO, a successful completion of the 3rd phase of the three year program will require an additional USD 3 million without which the successes achieved to date will otherwise be in vain as locusts, if left uncontrolled, will resurge and continue threatening food security and livelihoods of vulnerable populations. **End Note.**

Italian (CIT), Moroccan (DMA) and Migratory (LMI) Locusts in Central Asia and the Caucasus (CAC): No update was received at the time this report was compiled. However, the DMA populations are expected to have ended and only a few CIT and LMI activities may have persisted in a few places in the Caucasus.

Forecast: Locust activities will end during the forecast period (OFDA/AELGA).

Italian, Migratory and Moroccan locusts are a constant threat to the CAC region. These pests can profusely multiply and attack tens of millions of hectares of crop land, pasture land and affect livelihoods of more than 20 million vulnerable rural inhabitants that eke a living primarily from farming and herding. With the ability to travel more than 100 km (60 miles) each day, these locusts can decimate dozens of hectares of cereal crops, pasture, cotton, fruit trees, leguminous plants, sunflower, tobacco, vineyard, vegetable and others over vast areas. Most of the countries affected by these three locust species are relatively new and lack the capacity to effectively prevent and control these pests (The once robust centralized pest

control capacity in these countries disappeared with the downfall of the Soviet system leaving each country to fetch for itself).

Currently, USAID/OFDA is sponsoring project activities through the UN/FAO to help strengthen/build national and regional capacity to prevent and control the threats these notorious pests pose to the vulnerable 20 plus million people in these regions (for further detail, refer to page 5 column 2 above).

Timor and South Pacific: No update was received from East Timor during August and ETOP situation may have been calm during the winter season.

African Armyworm (AAW): AAW activities were absent in all outbreak areas in August.

Forecast: AAW situation will remain calm during the forecast period (IRLCO-CSA, OFDA/AELGA).

Quelea (QQU): QQU birds were reported attacking irrigated rice in Tana River County in **Kenya** where control operation was underway during August. The birds were also reported in Mvomero district in Morogoro region, **Tanzania** where survey operations are planned to determine the size of the infestation and prepare for interventions (IRLCO-CSA).

Forecast: QQU birds will likely continue being a problem to irrigated crops in **Kenya** and perhaps to winter wheat in **Zimbabwe** during the forecast period (IRLCO-CSA, OFDA/AELGA).

Facts: QQU birds can travel ~100 km/day looking for food. An adult QQU bird can consume 3-5 grams of grain and destroy the same amount each day. A medium density QQU colony can contain up to a million or more birds which are capable of consuming and destroying 6,000 to 10,000 kg of seeds/day, enough to feed 12,000-20,000 people/day.

Rodents: No reports were received on rodents during August, however, this pest is a constant threat to crops and produce and always requires active surveillance and preventive interventions to avoid any major threats (OFDA/AELGA).

*related human health risks, minimize environmental pollution, increase food security and ultimately contribute to the national economy. An SPS can be effectively established by linking key stakeholders in neighbouring countries. **End note.***

Front-line countries must remain regular monitoring. Invasion countries should stay alert. DLCO-EA, DLCCs, IRLCO-CSA, national PPDs, CNLAs, DPVs, ELOs, etc., are encouraged to continue sharing ETOP information with stakeholders as often and as early as possible. Lead farmers and community forecasters must remain vigilant and report ETOP detections to relevant authorities immediately.

Inventories of Pesticide Stocks for ETOP Prevention and Control

Control operations were not carried out against SGR in August in the outbreak areas and Acridid pesticide inventories remained unchanged during this month.

Note: A number of SGR prone countries, particularly in West and North West Africa have reported large quantities of obsolete pesticide stocks. Some of the stocks are leftovers from the previous locust campaigns, including that of 2003-05 campaign. Safe disposal of these stocks will require considerable amounts of technical and financial resources. **End note.**

OFDA/AELGA encourages countries to continue exploring alternatives such as IPM to minimize and reduce risks associated with pesticide stockpiling. A judiciously executed triangulation of surplus usable stocks from countries with large inventories to countries where they are much needed is a win-win situation worth considering.

Note: *A Sustainable Pesticide Stewardship (SPS) can considerably strengthen the pesticide delivery system (PDS) at the national and regional levels. A strong PDS can effectively reduce pesticide*

Table 1. ETOP Pesticide Inventory in Frontline Countries

Country	Quantity (l/kg) [§]
Algeria	1,190,000 ~ ^D
Chad	44,500
Eritrea	-16,897 ~
Ethiopia	-3,975 ~
Libya	25,000 ~
Madagascar	206,000 ~
Mali	32,000 ^D
Mauritania	43,400 ~
Morocco	3,757,000 ~ ^D
Niger	75,800 ~
Oman	14,440 ~
Senegal	156,000 ~ ^D
Sudan	632,718 ~
Tunisia	77,530 ~
Yemen	22,000@ + 300 kg GM~

[§]Includes different kinds of pesticides in ULV, EC and dust formulations; ~ data may not be current; ^D = Algeria and Morocco 225,000 l of pesticides to Madagascar in 2013; Mali donated 21,000 l to Malawi, Mozambique and Tanzania in 2012 and FAO facilitated the triangulation; Mauritania donated 25,000 l to Libya in 2012 and to 30,000 l to Madagascar in 2013; GM = *GreenMuscle*TM (fungal-based biological pesticide); @includes donations from Saudi Arabia

LIST OF ACRONYMS

AAW	<i>African armyworm (Spodoptera expempta)</i>	ELO	<i>Végétaux (Department of Plant Protection)</i>
AELGA	<i>Assistance for Emergency Locust Grasshopper Abatement</i>	EMPRES	<i>EMPRES Liaison Officers</i>
AFCS	<i>Armyworm Forecasting and Control Services, Tanzania</i>	ETOP	<i>Emergency Prevention System for Transboundary Animal and Plant Pests and Diseases</i>
AfDB	<i>African Development Bank</i>	Fledgling	<i>Emergency Transboundary Outbreak Pest</i>
AME	<i>Anacridium melanorhodon</i>		<i>immature adult locust /grasshopper that has pretty much the same phenology as mature adults, but lacks fully developed reproductive organs to breed</i>
APLC	<i>Australian Plague Locust Commission</i>	GM	<i>GreenMuscle® (a fungal-based biopesticide)</i>
APLC	<i>Australian Plague Locust Commission</i>	ha	<i>hectare (= 10,000 sq. meters, about 2.471 acres)</i>
Bands	<i>groups of hoppers marching pretty much in the same direction</i>	IRIN	<i>Integrated Regional Information Networks</i>
CAC	<i>Central Asia and the Caucasus</i>	IRLCO-CSA	<i>International Red Locust Control Organization for Central and Southern Africa</i>
CBAMFEW	<i>Community-based armyworm monitoring, forecasting and early warning</i>	ITCZ	<i>Inter-Tropical Convergence Zone</i>
CERF	<i>Central Emergency Response Fund</i>	ITF	<i>Inter-Tropical Convergence Front = ITCZ)</i>
CIT	<i>Calliptamus italicus</i>	FAO-DLIS	<i>Food and Agriculture Organizations' Desert Locust Information Service</i>
CLCPRO	<i>Commission de Lutte Contre le Criquet Pèlerin dans la Région Occidentale (Commission for the Desert Locust Control in the Western Region)</i>	Hoppers	<i>young, wingless locusts/grasshoppers (Latin synonym = nymphs or larvae)</i>
CNLA(A)	<i>Centre National de Lutte Antiacridienne (National Locust Control Center)</i>	Kg	<i>Kilogram (~2.2 pound)</i>
CRC	<i>Commission for Controlling Desert Locust in the Central Region</i>	L	<i>Liter (1.057 Quarts or 0.264 gallon or 33.814 US fluid ounces)</i>
CTE	<i>Chortoicetes terminifera</i>	LMC	<i>Locusta migratoriacapito</i>
DDLC	<i>Department of Desert Locust Control</i>	LMM	<i>Locusta migratoria migratorioides (African Migratory Locust)</i>
DLCO-EA	<i>Desert Locust Control Organization for Eastern Africa</i>	LPA	<i>Locustana pardalina</i>
DMA	<i>Dociostaurus maroccanus</i>	MoAFSC	<i>Ministry of Agriculture, Food Security and Cooperatives</i>
DPPQS	<i>Department of Plant Protection and Quarantine Services</i>	MoARD	<i>Ministry of Agriculture and Rural Development</i>
DPV	<i>Département Protection des</i>		

NCDLC	National Desert Locust Control, Libya	<i>distractive dry season pest, largely due to the destruction of its natural habitat through deforestation, land clearing, for agricultural and other development efforts and from associated weather variability.)</i>
NOAA (US)	National Oceanic and Aeronautic Administration	
NSD	Republic of North Sudan	
NSE	<i>Nomadacris septemfasciata</i>	
OFDA	Office of U.S. Foreign Disaster Assistance	
PHD	Plant Health Directorate	
PHS	Plant Health Services, MoA Tanzania	
PPD	Plant Protection Department	
PPSD	Plant Protection Services Division/Department	
PRRSN	Pesticide Risk Reduction through Stewardship Network	
QU	<i>Quelea bird</i>	<u>Who to Contact:</u> If you have any questions, comments or suggestions, or know someone who would like to subscribe to this report, please, feel free to contact us: Yeneneh Belayneh, ybelayneh@usaid.gov ; Tel.: + 1-202-712-1859 To learn more about our activities and programs, please, visit us at: http://www.usaid.gov/what-we-do/working-crises-and-conflict/responding-times-crisis/how-we-do-it/humanitarian-sectors/agriculture-and-food-security/pest-and-pesticide-monitoring
SARCOF	Southern Africa Region Climate Outlook Forum	
SGR	<i>Schistoseca gregaria</i>	
SWAC	South West Asia DL Commission	
PSPM	Preparation, Strategic Planning and Mitigation (formerly Technical Assistance Group - TAG)	
Triangulation	<i>The process whereby pesticides are donated by a country, with large inventories, but often no immediate need, to a country with immediate need with the help of a third party in the negotiation and shipments, etc. Usually FAO plays the third party role in the case of locust and other emergency cases.</i>	
USAID	the Unites States Agency for International Development	
UN	the United Nations	
ZEL	<i>Zonocerus elegans, the elegant grasshopper</i>	
ZVA	<i>Zonocerus variegatus, the variegated grasshopper (This insect is emerging as a fairly new</i>	